

HURRICANE GEORGES RECONSTRUCTION AND RECOVERY IN THE EASTERN CARIBBEAN

SPECIAL OBJECTIVE DOCUMENT

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ACRONYMS

CA - Cooperative Agreement

CBO - Community-Based Organization

CDERA - Caribbean Disaster Emergency Response Agency

CDMP - Caribbean Disaster Mitigation Project

CSP - Customer Service Plan

DMFC - Disaster Mitigation Facility
FAO - Food & Agricultural Organization
FAVA - Florida International Voluntary Corps
FEMA - Federal Emergency Management Agency (US)
FSN - Foreign Service National
IDB - Inter-American Development Bank
LLR - Lower Level Result
NODS - National Offices of Disaster Services
NEMA - National Emergency Management Agency
NGO - Non-governmental Organization
OFDA - USAID Office of Foreign Disaster Assistance
PAHO - Pan American Health Organization
POA - Plan of Action
PSC - Personal Services Contract
SO - Strategic Objective
SpO - Special Objective
SUMA - Supplies Management Project (PAHO)
TA - Technical Assistance
UNDP - United Nations Development Program
UNDHA - United Nations Department for Humanitarian Assistance
USAID/W - United States Agency for International Development/Washington
USDH - United States Direct Hire
WB - World Bank

I. INTRODUCTION

Understanding the Development Challenge

From September 20-22, 1998, Hurricane Georges, a major (category III) storm, struck the Eastern Caribbean islands of Antigua & Barbuda and St. Kitts & Nevis. The hurricane caused severe damage to economic and social infrastructure and dealt a serious blow to both islands' economies. Damage was most serious on St. Kitts & Nevis - estimated at more than one and a

half times the small country's GDP. Infrastructure damage to Antigua & Barbuda was also significant.

Hurricanes and tropical storms periodically wreak havoc in the Caribbean, creating conditions of disaster among the general population and destroying infrastructure. They have destabilized the small Eastern Caribbean economies and produced conditions of internal instability, and they have significantly reduced vitally important levels of investment, export earnings and tourism.

The capacity of small island states to stabilize and resume normal economic activity following hurricane induced setbacks depends on several factors, including the size of the country's international reserves, the country's capacity to organize external financial aid flows, and the speed with which normal trade patterns can be reestablished. Given that the small economies of St. Kitts & Nevis and Antigua & Barbuda, have small reserves, considerable external debt, damaged and destroyed infrastructure, and a significantly reduced productive capacity, it is clear that recovery can only be realized with the help of external aid inflows.

Over the past five years USAID has invested \$5 million dollars in disaster mitigation and vulnerability reduction activities in the Caribbean, with significant results. However, the devastation caused by Hurricane George makes it clear that additional assistance in reconstruction, disaster mitigation and preparedness is imperative. This Special Objective (SpO) under the Caribbean Regional Program recognizes the special development challenge that exists in the region, and places high priority on disaster mitigation and preparedness measures for loss reduction in the future.

Relationship to USAID/J-CAR Strategy

US Foreign policy recognizes the special needs of the small economies in the Eastern Caribbean, and is committed to assist these small nations in their development efforts. This includes humanitarian/disaster assistance as well as assistance in the areas of trade, environmental protection and the administration of justice.

The Caribbean Regional Program (CRP) Activities under this SpO will complement and contribute to the achievement of the CRP goal of "Broad-based and sustainable development in the Caribbean" by assisting St. Kitts and Nevis and Antigua & Barbuda in their reconstruction and recovery. Specifically, reactivating economic activity (see IR3 below) will contribute directly to the CRP objective (SO1) of increased employment, and disaster mitigation activities (see IR2 below) will contribute to the achievement of the CRP strategic objective (SO2) of improved environmental management.

II. PROBLEM ANALYSIS

From September 20-22, 1998, Hurricane Georges swept through the Caribbean leaving death and devastation in its wake. The loss of life and property exceeds that of any natural disaster in the

Caribbean in recent memory. With some sectoral reports yet to be completed, the cost of reconstruction in the eastern Caribbean, the Dominican Republic and Haiti, now stands at \$3.25 billion. Although St. Kitts & Nevis and Antigua & Barbuda suffered relatively less damage than the Dominican Republic or Haiti, the impact of the hurricane on their small economies was significant. The economic growth in both countries was sharply reduced during the last four months of 1998 due to extensive damage to major infrastructural services and tourism facilities, and it is yet to fully rebound.

Most of the damage from Hurricane Georges and previous hurricanes in the region (including Hurricane Luis in 1995) has been in the area of destruction to physical infrastructure. The housing stock in the Caribbean has proven to be extremely vulnerable to roof loss. In addition other infrastructure supporting the economic viability of the countries has suffered major structural damage leaving income earning sectors such as tourism and agriculture disabled. Government-owned buildings including schools, some of which were used as emergency shelters, were either completely destroyed or suffered major structural damage. Lifeline facilities like hospitals, electrical utilities, and water and telephone systems were severely damaged, resulting in loss of income and undue hardship on the afflicted populations.

Hurricane Georges hit St. Kitts & Nevis on September 20 and 21, 1998. Damage assessments indicate that approximately 85 percent of the housing stock was affected in St. Kitts. It is estimated that between 2,500 and 3,000 people had to leave their homes. In Nevis, 35 percent of the housing stock was damaged. The total damage to St. Kitts & Nevis is estimated at \$484 million.

The government also suffered major damage and loss to its building stock. Most schools were severely damaged with roof and furniture loss estimated at \$7 million. Over 50 percent of the designated school shelters suffered major damage, rendering them unusable. Infrastructure damage was mainly in the electrical generation and distribution areas and there was damage to water facilities and phone lines. For the most part, these have been restored with the use of government funds and assistance from neighboring CARICOM countries.

90 percent of the Joseph N. France General Hospital was rendered non-functional. In addition, the Pogson Hospital and Mary Charles Hospital on St. Kitts, and the Alexandra Hospital in Nevis sustained roof damage, and six health centers reported serious damage. Medical equipment and supply losses were extensive and losses in the health sector are estimated at several millions of dollars.

An estimated 500 of the 1,445 hotel rooms were damaged. Most tourist facilities were closed for at least two months and several beaches were badly eroded. In the agricultural sector, losses were roughly \$2.5 million, with the sugar crop suffering as much as a 50 percent loss. Estimated immediate economic losses total \$8.6 million and serious dislocations in employment were experienced. In the transport sector the main commercial port at Basseterre suffered roof loss to the transit facilities resulting in some loss of cargo. At the recently constructed cruise ship port, all catwalks and the two berthing platforms were destroyed. The main airport terminal suffered

\$3.8 million in damages including roof loss and equipment damage, leaving air traffic control inoperable. In the aftermath of the storm, some 6,000 people lost employment in St. Kitts & Nevis alone.

In Antigua, most of the severe damage was along the south coast. Five districts were declared to be disaster areas. Fortunately, there were only a few deaths and cases of serious injury. The hurricane destroyed nearly 400 homes, damaged about 1759 others and rendered homeless an estimated 3,368 persons. Most of the utility sector experienced fewer downed poles than in the past. In the private sector, it is clear that buildings that did not meet or adhere to construction codes for a hurricane area experienced extensive damage. In the health sector, the Holberton Hospital suffered some damage. There was more extensive damage to the Mental Hospital than was originally reported. In addition, there was extensive damage to the Bolans and Freetown clinics, which has resulted in their closure. Their services have been transferred to Jennings and Newfield clinics, respectively.

In the utility sector most of the poles have been either replaced or re-planted and extensive work is being done to reconnect downed service lines.

The tourism sector sustained significant damage, particularly to roofs of hotels and adjacent buildings and grounds. Preliminary estimates indicate that the livestock sector suffered approximately 15 percent damage. Fisheries also suffered extensive loss of fish pots but there was minimal boat damage. Crops were damaged by heavy winds. However, as a result of the low rainfall that accompanied the hurricane there was no major soil erosion. The total estimated cost of the damage done to the public schools was \$1.5 million, and to private schools \$318,000. In the transport sector, the navigational equipment at the airport sustained severe damage.

In Barbuda, the major tourist facilities and a few homes were extensively damaged.

Eight months after the Hurricane, large unmet needs still exist in essential services. National governments and the private sector have clearly not been able to manage the situation and return to normalcy under current funding levels. This situation is likely to continue if the international donor community does not provide additional assistance.

Immediate Response to Hurricane Georges

Response by local governments

The two governments of St. Kitts & Nevis and Antigua & Barbuda responded quickly and with measurable effectiveness in the aftermath of Hurricane Georges. National disaster response and preparedness organizations (NODS and NEMA) identified immediate needs and coordinated emergency relief efforts with government ministries. Both governments immediately initiated coordination with regional disaster response agencies such as the Caribbean Disaster Emergency Response Agency (CDERA) and the Caribbean Disaster Relief Unit (CDRU). Schools and other public buildings were made available for the homeless, emergency food distribution systems

were established (school shelters do not contain cooking facilities), and public/private sector teams were established to restore water and electricity services.

The U.S. government contribution

Five days after Hurricane Georges' landfall, regional response teams dispatched by USAID/LAC's Regional Office of Disaster Assistance (OFDA/LAC) had completed their initial task of distributing relief supplies and assessing damage. During the emergency phase, the US Government, through OFDA, provided \$500,000 in urgent relief supplies including plastic sheeting, water jugs and inflatable water storage containers, chainsaws, and made a contribution to the Pan American Health Organization's appeal for emergency health interventions. OFDA/LAC provided on-site training in the use of plastic sheeting for emergency shelter and household repairs. An additional \$1.0 million has been provided for the recovery and reconstruction phase, of which half will be used for disaster preparedness and mitigation, and half for other reconstruction activities. USAID has collaborated with other donors in providing technical assistance and training to ensure that proper mitigation practices are employed in reconstruction programs. The U.S. Southern Command has provided assistance to St. Kitts by building a multi-purpose emergency shelter and the Peace Corps deployed six Crisis Corps volunteers to Antigua to assist with housing reconstruction.

Other donor contribution

Other major bilateral and multilateral organizations have concentrated their resources (both loans and donations) upon strategies, which address the health sector (hospital reconstruction), community center shelters and school reconstruction. Major donors meet on a regular basis to coordinate their development assistance and Hurricane Georges reconstruction/recovery programs to avoid duplication. This occurred as part of the Eastern Caribbean Donor Group Standard Operating Procedures for disasters in the Caribbean. It was convened and chaired by the UNDP. USAID/OFDA and the U.S. Embassy in Bridgetown participated in several of these meetings during the immediate post-impact period.

The United Nations Development Program (UNDP) provided project development personnel and \$150,000 for emergency response coordination through CDERA for both islands. The UNHCR provided \$50,000 for relief assistance to both islands. The Caribbean Development Bank provided \$100,000 for unspecified emergency assistance and \$500,000 for immediate assistance to the education sector. The World Bank provided a \$500,000 loan for reconstruction of the St. Kitts/Nevis education sector and an additional \$2.4 million in fast disbursing funds to finance imports for recovery items to St. Kitts & Nevis. In December the World Bank also signed a loan with the Government of St. Kitts & Nevis valued at \$8.1 million as part of the OECS Emergency Recovery and Disaster Management Program. CIDA provided \$315,000 to both nations for health and human needs. Taiwan provided \$1million to St. Kitts for unspecified assistance.

The FAO provided personnel for the assessment and funded the purchase of food for both countries. PAHO provided a Supplies Management (SUMA) team to St. Kitts & Nevis and

Antigua & Barbuda to assist with relief supply management and \$10,000 for health needs, including water purification for each island. UNICEF provided \$10,000 to each island for preschool rehabilitation. The British Department for International Development (DFID) provided \$25,000 for emergency response for both islands and an electricity restoration crew for St. Kitts. The IADB provided \$100,000 to CDERA for emergency assistance for St. Kitts & Nevis and a \$500,000 loan for immediate restoration of the education sector in St. Kitts.

Both the Caribbean Development Bank and the World Bank have provided approximately \$1.0 million each for reconstructing the damaged medical and surgical wards at the Joseph N. France General Hospital, and the government of St. Kitts has financed the reconstruction of the psychiatric ward. The cost of reconstructing the pediatric, maternity and a private patient wards is approximately \$1.0 million to \$1.5 million each and no other donors have shown interest.

Relief and reconstruction assistance was also provided by neighboring governments for the afflicted countries and included varying amounts of cash donations, building materials, manpower to assist with the restoration of power, cooked meals and other general assistance for the response efforts. In addition, regional private sector entities provided emergency supplies of water, food, and other assistance for electricity restoration.

Reconstruction achievements to date

The immediate response phase is now over in St. Kitts-Nevis and Antigua & Barbuda. Efforts are now focussed on recovery and rehabilitation. In both countries critical services, including water, electricity and telephone have been restored. Major infrastructure, e.g., the airports in both countries, has been repaired and is fully operational. Schools have been reopened and there is a concerted effort to have life return to a state of normality. Many of the schools have been repaired in haste without the use of mitigation measures and there is still an outstanding need for classroom equipment.

The health services are yet to be restored on St. Kitts. As was previously noted, the only referral hospital, the Joseph N. France General Hospital, is yet to be reconstructed. However, the government, with assistance from PAHO, has been making temporary repairs to three wards, including the old pediatrics and maternity wards, and the hospital can receive and use new hospital equipment and supplies. Once new wards are constructed these repaired wards will be used as administrative offices.

The sugar industry has restructured its operations to compensate for losses due to hurricane. Small sugar farmers are struggling due to the loss of infrastructure and lack of access to credit. There is still a need for low income housing in both countries. People are still homeless and awaiting assistance from the government. The governments in both countries have been slow in responding to this need due to lack of resources and inappropriate systems to address the reconstruction. Most of the hotels are back in operation, although the number of rooms is down nearly a quarter. Cruise ship arrivals are down in St. Kitts & Nevis and recovery is likely to depend upon the pace at which the catwalks at Port Zante are rehabilitated. USAID/J-CAR

proposes to respond to several of these yet unmet needs through the SpO Results Package described in Section 3.0 below.

III. PROPOSED USAID SpO RECOVERY AND RECONSTRUCTION PROGRAM

As indicated above, the initial emergency response was provided by local neighboring governments, donor agencies and other nations including the U.S., to deal with the most immediate and pressing basic needs of Hurricane Georges' victims. This assistance was key to rapidly re-establishing basic public services such as electricity, water, transportation, and air traffic control.

However, additional support will be needed to help the islanders return to self-sustaining economic activities and to strengthen in-country capabilities to mitigate the effects from future disasters. The SpO is designed to provide maximum support to the Antiguan and St. Kittian governments' reconstruction and rehabilitation efforts within the relatively short time frame of twenty-four months. Activities will be designed that recognize the short to medium term nature of this effort while contributing to the long term sustainable development objectives of USAID's regional program.

The SpO is aimed at achieving three intermediate results in St. Kitts & Nevis and Antigua & Barbuda: IR1: restoring critical hospital services (applies to St. Kitts & Nevis only); IR2: enhancing local capacity for disaster mitigation, and IR3: reactivating economic activities. Resources will be focused on recovery and reconstruction activities which have not been funded, or which are under-funded, and on activities where USAID has a comparative advantage (e.g. OFDA's disaster preparedness and mitigation methodologies).

The criteria used to guide the preparation of the SpO and select specific activities include:

- Agency Focus: The degree to which an activity contributes to the achievement of USAID's vision, goals, strategy, and focus and contributes to public awareness and support for such activities;
- Linkage with USAID/J-CAR Regional Strategy and OFDA/LAC Caribbean Strategy: The degree to which a proposed intervention complements or reflects these strategy frameworks.
- Emergency: The urgency with which the proposed activity warrants external international donor assistance to decrease vulnerability of the disaster affecting the at-risk population. Emergency supplemental appropriations by the U.S. Congress designated for such purpose normally require expenditure within 12 to 24 months;

- Host Country Priority: The degree to which requirements for assistance for recovery and reconstruction in St. Kitts & Nevis and Antigua & Barbuda remain a priority of the host government and local agency officials;
- Ease of Implementation: The extent that a proposed activity can be effectively and expeditiously undertaken with minimal USAID/J-CAR involvement, either through existing inter-agency, inter-institutional mechanisms or by pre-approved organizations requiring minimum direct Mission management oversight;
- Donor Coordination and Leverage: The ability of emergency funding to elicit additional resource allocations from other Agency programs and other donor programs, and/or the opportunity for regional donor coordination/partnership;
- USAID/W Approval Process: The ease with which an intervention will be approved under the USAID/W strategy review process, the review process results in a recommendation for modification and/or approval by the AA/LAC with the concurrence of the PPC and M bureaus.

The SpO provides a strategic focus within the regional strategy for Hurricane Georges reconstruction efforts. It will facilitate discussions with regional counterparts, and will provide the basis for obligating supplemental funds before the end of fiscal year FY 1999. Further, the SpO is consistent with the overall Agency goal of promoting sustainable development, self-reliance, and local participation to facilitate higher levels of material and social well being for all citizens, and with the CRP strategy.

The SpO will seek to coordinate with and/or jointly fund the emergency programs of other donors/lenders such as the World Bank (WB) and Inter-American Development Bank (IDB) and strengthen existing recovery programs.

Linkage to USAID/J-CAR and OFDA Regional Strategies

Caribbean Regional Program (CRP): The proposed activities under the SpO will complement USAID/J-CAR's CRP initiatives targeted at small and micro-businesses, and will enhance conditions for improved environmental management through its mitigation activities that are aimed at reducing vulnerability. Funding for the five year CRP is projected at \$30 million. The CRP will work in partnership regional institutions such as CARICOM and the OECS, national governments, non-governmental organizations and the private sector to achieve three strategic objectives: 1) increased employment (through increased trade and production); 2) improved environmental management; and, 3) increased efficiency and fairness of legal systems. The CRP will support activities which confer benefits to the Caribbean region, and which our key partners identify as priorities.

LAC Bureau Hurricane Georges Support: USAID/LAC-CAR in consultation with LAC, OFDA/Costa Rica, PAHO and with government officials in St. Kitts has also developed a

program that will utilize \$500,000 (\$300,000, CS and \$200,000, DA) pledged by the LAC Bureau for Hurricane George relief activities in St. Kitts/Nevis and Antigua & Barbuda. This \$500,000 is in addition to the \$3.0 million earmarked for the hurricane supplemental for the Eastern Caribbean and is needed immediately. Within this \$500,000, funds would be utilized to assess hospital equipment and supply needs in St. Kitts and Nevis (J.N. France and Alexandra Hospitals), procure and install equipment, and train workers in operations and maintenance; monies also would be used by OFDA in Antigua & Barbuda to provide TA for their national shelter policy program, mitigation policy/planning program, a school disaster preparedness program, in-country disaster management training, and to develop video and training materials related to low cost housing.

OFDA Support to the Region: Other relevant USAID assistance to the Caribbean includes funds provided through OFDA. In addition to OFDA's emergency phase contribution noted earlier, OFDA will also provide funding for reconstruction, disaster preparedness and mitigation activities that will build on the successes and lessons learned under the Caribbean Disaster Mitigation Project.

OFDA anticipates that monies will be used to develop a Disaster Mitigation Facility for the Caribbean (DMFC). These resources/activity will also leverage support for regional mitigation planning and policy enhancement, capacity building, and natural hazard assessment in order to reduce future losses from hurricanes and other natural hazard impacts. The DMFC will work closely with regional and national institutions involved in development finance, physical and economic planning, and disaster preparedness and mitigation to develop vulnerability reduction policies and conditionalities for improved building standards and practices. In addition, it will seek to facilitate at the national level, the integration of mitigation tools into the national and economic development planning process. Interventions will serve to strengthen the capacity of host country institutions to implement measures that can mitigate damage from future hurricanes and decrease the need for emergency response resources in the future.

IV. ILLUSTRATIVE APPROACHES AND IMPLEMENTING PARTNERS

IR 1 Hospital Services Restored (St. Kitts & Nevis only)

Overview

Hurricane Georges inflicted major damage on the Joseph N. France Hospital in St. Kitts, leaving only a small wing of the hospital operational. With PAHO's assistance makeshift repairs have enabled three wards (including pediatrics and maternal) to function, but damage was so extensive that entire new wards will need to be constructed (psychiatric, surgical, medical, pediatric, maternity, and a private ward). This is the only hospital in St. Kitts & Nevis, serving a population of approximately 40,000 persons. A private health care system is not well established and there are no private hospitals in the country. This activity would therefore significantly

contribute to a reduction in loss of life and to overall reduced risk/vulnerability for the people of St. Kitts & Nevis. Kittians needing medical attention have to be medically evacuated to nearby countries at significant cost.

The reconstruction of the Joseph N. France General Hospital as well as the procurement of hospital equipment and supplies is very high on the list of local priorities expressed in the several reports reviewed and personal interviews conducted by USAID. Prime Minister Douglas indicated in a meeting with USAID officials that the reconstruction of the Joseph N. France General Hospital was a high government priority. Given the contributions already made by the government of St. Kitts & Nevis and other donors, the highest remaining priority is to secure financing for reconstructing and equipping the pediatric ward at the Joseph N. France Hospital.

Reconstruction of the six wards that are needed are estimated at \$1-\$1.5 million per ward, excluding equipment and supplies. Reconstruction of the psychiatric ward was given the highest priority because of the physical layout of the hospital, and was undertaken by the government of St. Kitts & Nevis without external financing. The CDB has committed approximately \$1.2 million for the surgical wing, and the World Bank has pledged \$1.0 million for the medical wing. The government of St. Kitts estimates these two wards will cost \$1.3 million each, and will make up the difference using national funds. The government estimates that the cost for reconstructing the somewhat smaller 24-bed pediatric ward is \$1.0 million.

Illustrative Approaches

Hospital Reconstruction

Because of the participation of the other donors in this reconstruction activity, namely PAHO, CDB, and the World Bank, the reconstruction of the pediatric ward could be accomplished through a grant arrangement with the CDB or PAHO. The government's preferred mechanism is for a bilateral agreement and separate account with the Government of St. Kitts & Nevis. However, the government has stated that a partnership with CDB or PAHO would also be acceptable. Partnership with one or the other of these organizations could speed implementation and significantly reduce the need for direct oversight by USAID/J-CAR.

Hospital Equipment Supplied

Funds will be allocated for the procurement of additional hospital equipment and supplies beyond those envisioned in PAHO's initial proposal to USAID/J-CAR. PAHO's original proposal addresses a partial list of equipment and supply needs in the Joseph N. France (St. Kitts) and Alexandra (Nevis) hospitals. Local officials highlighted the significant gap that still exists in this area as a high priority. These commodities clearly meet the designation of emergency assistance and could be procured through a grant mechanism with PAHO.

Psychological Services Provided

Funds may also be allocated for the provision of counseling services for the affected countries. Post trauma stress, which can have a lasting affect on many people, has been highlighted by many people in the health sector as an area which is not being adequately addressed in St. Kitts /Nevis. This was also pointed out by the Prime Minister who indicated that specialists have had to be brought in to counsel individuals affected by the hurricane. There are insufficient in-country resources to diagnose and treat these conditions which have proliferated since the passage of Hurricane Georges. The most vulnerable of this group happens to be school age children who seem to be unable to cope without professional assistance/counseling. USAID proposes to provide in-country training to establish the capacity for counseling in the short and medium-terms. This training will be provided to social workers, nurses, etc., working through an organization like the Pan American Health Organization.

Implementing partners

The implementing partners for this will be the Pan American Health Organization, the Caribbean Development Bank and the government of St. Kitts & Nevis.

Expected Outcomes

- Hospital constructed (Pediatric Ward).
- Hospital wards equipped with adequate equipment and supplies.
- Reduction in the incidence of post-traumatic stress from Hurricane Georges.

The Ultimate Customers

The ultimate customer is the general public, i.e., the 40,000 persons residing in the islands of St. Kitts & Nevis.

Intermediate Customers

The main intermediate customer is the Ministry of Health of St. Kitts & Nevis whose capacity will be strengthened to better deal with future disasters.

IR 2 Enhanced local Capacity for Disaster Mitigation

Overview

Activities under this IR will focus on strengthening the capability of the governments and disaster management partners in St. Kitts & Nevis and Antigua & Barbuda to implement vulnerability and risk reduction activities during the Hurricane Georges reconstruction phase.

Illustrative Approaches

Achieving this IR will require implementing activities designed to: improve mitigation policy and disaster planning, establish improved building codes and standards, and provide some seed funding to facilitate low-income housing improvements (St. Kitts & Nevis only). Other activities would serve to strengthen the emergency shelter systems, increase public awareness and preparedness, and train a local cadre of disaster management trainers. These proposed activities are consistent with and complement other activities that OFDA is supporting under its regional mitigation and training program.

Mitigation policy and planning improved

USAID will provide technical assistance and support to governments and to national and regional disaster management organizations in the following areas:

- A process-oriented policy and planning activity that will result in a disaster mitigation policy and plan which is fully integrated into the reconstruction effort and into ongoing physical and economic development planning.
- A review of current disaster management institutional arrangements and systems with recommendations and follow-up actions to strengthen these institutional arrangements and systems.
- The production of multi-hazard maps including storm surge mapping of heavily populated and coastal areas, and volcanic hazard mapping of the Liamigua volcano for use in improved land use planning, economic development and evacuation planning.
- Support may also be provided for vulnerability audits of existing heritage sites that were damaged by Hurricane Georges in Antigua & Barbuda.

Improved Building Codes, Standards and Practices

Activities will focus on establishing improved building codes, standards, and practices in St. Kitts & Nevis, along with some funding to promote retrofitting of low cost housing. St. Kitts & Nevis suffered damage or destruction to 85 percent of its housing stock during the passage of Hurricane Georges. It also suffered losses to major infrastructure and lifeline facilities. USAID/J-CAR proposes to use St. Kitts & Nevis as a building code model for the Caribbean region.

Activities under this IR will assist the Government of St. Kitts in developing the necessary tools for addressing vulnerability reduction in the physical infrastructure. They will include technical assistance and support for the following:

- Preparation of a new St. Kitts & Nevis Building Code based on the OECS and Caribbean Uniform Building Code;

- A review of building code implementation and compliance challenges within existing mechanisms, and recommendations and follow-up for improvement;
- Local training of building inspectors to implement national building codes; and training (in-country workshops) of architects and engineers in hurricane resistant, design techniques.
- In addition, seed funding may be provided to the National Development Foundation of St. Kitts & Nevis to start up a low-income housing improvement/retrofit activity as part of the ongoing low-income home improvement activity. A successful pilot was done for Antigua, St. Lucia and Dominica under the OFDA CDMP project.

These activities will complement other OFDA regional activities that also support this intermediate result. For example, OFDA is updating the Caribbean Uniform Building Code (CUBC) to conform with the International Building Code, and arranging for a diploma Building Inspectors course at the University of Technology in Jamaica.

Emergency Shelter Systems strengthened

Activities would include technical assistance and support in the following areas:

- Developing a national emergency shelter policy and a comprehensive shelter program in St. Kitts & Nevis and Antigua & Barbuda. This would involve an in-depth analysis of the building systems and management structures. It would also be closely linked to the mitigation policy and to developing a comprehensive disaster management policy for the countries;
- Conducting a series of shelter management training workshops to build a cadre of trained persons and trainers in shelter management;
- Conducting vulnerability audits of the remaining schools that serve as shelters in St. Kitts & Nevis. (The CDMP project conducted several vulnerability audits of schools that are being used as emergency shelters with a view to strengthening these buildings to better serve this added purpose. Several audits were conducted under the CDMP but there is an existing gap that needs to be filled).
- Funds may also be provided to serve as country contributions for Antigua & Barbuda and St. Kitts & Nevis to draw down on the CDB funds to conduct the retrofits for all the government schools in these countries.

Improved Public Awareness and Action

Activities will enhance local capacity for disaster mitigation by developing a public information and education program in collaboration with the National Offices of Disaster Management in each country. Technical assistance and support would likely focus on the following:

- A public information and education programs on good building practices and retrofitting techniques that target low and middle-income homeowners.
- A school disaster preparedness program including the production/distribution of disaster preparedness booklets, audio visual tools and equipment for schools, teacher/ training workshops for disaster management at the primary and secondary school levels, and the preparation of disaster plans for each school.
- A Disaster Auxiliary Corps. The Corps would receive specialized training and will act as a volunteer arm of the National Emergency Management Agency. This will be patterned after the Disaster Auxiliary Corps, which is now a success story for the British Virgin Islands.

Local Cadre of Disaster Management Trainers

Activities will focus on developing a strong cadre of disaster management trainers and trained personnel for St. Kitts & Nevis and Antigua & Barbuda. Many of the pre and post disaster preparedness and response functions are weak due to the lack of trained personnel to effectively undertake these tasks. Activities under this IR would focus on building this cadre in areas of disaster program management, shelters and shelter management (discussed above), damage assessment and needs analysis, and community disaster preparedness. Training will be done by OFDA using a training-of-trainers methodology.

Implementing Partners

USAID will work with public and private institutions and implementing partners to carry out the above activities. OFDA will be primarily responsible for implementing these activities and for managing the funds. Funds could be used by OFDA directly, or used in conjunction with OFDA's proposed Disaster Mitigation Facility for the Caribbean which could leverage additional financial support. This facility is to be managed and implemented by OFDA/CDB in collaboration with regional and U.S. based partners, and is intended to replace OFDA's Caribbean Disaster Mitigation Project which ends in September 1999. The disaster mitigation activities and training identified under this SpO would complement OFDA's current initiatives and strategy in the Caribbean as well as the on-going OFDA/LAC training in the Caribbean.

Expected Outcomes

- Mitigation Policies and Plans in place for Antigua & Barbuda and St. Kitts & Nevis.
- Stronger national emergency institutions and systems.
- Hazard maps for at risk and vulnerable areas.
- Building Codes prepared and implemented with adequate systems for compliance.

- Improved building designs and practices in the formal and informal building sector.
- National Emergency Shelter Policies and Programs implemented.
- Heritage sites restored using mitigation practices.
- School/shelters retrofitted.
- Strong volunteer support for National Emergency Management Systems.
- Local cadre of disaster management trainers.
- More aware and informed school population/including teachers.
- Disaster plans prepared and practiced regularly for all schools.

Specific targets will be established in conjunction with implementing contractors and grantees.

Ultimate Customers

The ultimate customers of the mitigation activities are the victims of Hurricane Georges in St. Kitts & Nevis and Antigua & Barbuda whose vulnerabilities have increased and continue to do so with inaction either by themselves, the affected governments, or the donor community. By extension, due to the nature of mitigation activities in general, especially those focused on policy development and reform, the entire population would benefit from these activities. The school program will target school age children under the age of 16. The institutional strengthening activities will help local institutions to improve their capacity to effectively carry out their activities through work plans that partner implementing agencies.

Intermediate Customers

Intermediate customers include local NGOs, CBOs, NODS, NEMA and affected communities. As a result of their involvement in planning, designing and carrying out activities described above, their respective institutional capability will be strengthened, much like the process of "hands-on institutional development." In particular, these organizations are expected to have an increased capability to help people be prepared for and cope with future disasters.

IR 3 Economic Activities Reactivated

Overview

Hurricane Georges seriously damaged economic and social infrastructure and dealt a serious blow to the islands' economies, especially to St. Kitts & Nevis. Damage to the St. Kitts economy affected the country's principal productive sectors - agriculture and tourism. In agriculture, estimates of damage to the sugar cane crop vary. The Caribbean Development Bank attributed losses of 6,182 tons of sugar, valued at \$2.7 million, to Hurricane Georges, and forecasts sugar

exports (which had declined from nearly 30,000 tons in 1997 to 18,850 tons in 1998) to be only 17,600 tons in 1999. The parastatal agency, that manages production, estimated a 50 percent crop loss for 1999 (i.e. approximately 9,425 tons).

Losses in other crops, primarily annual crops grown in remote parts of the island, will also have severe consequences. Some seven months after the Hurricane, St. Kitts is still importing these crops from neighboring countries, adding an additional strain on its foreign exchange reserves. Serious dislocations in employment were experienced and an estimated 6,000 people lost their jobs.

For the overall economy and in terms of total employment, by far the most significant damage was to the tourism sector, which directly and indirectly employs the largest number of people on the island. The tourism sector had performed extremely well during the first nine months of 1998. However, performance during the fourth quarter was affected by the unavailability of hotel rooms. An estimated 500 of St. Kitts' 1445 hotels rooms were damaged by Hurricane Georges. The largest hotel resort was still closed in April 1999 and some smaller facilities have not yet reopened, causing high unemployment. The cruise ship berth was also damaged and some cruise ship calls scheduled for 1999 have been cancelled. For the most part, it is anticipated that the tourism sector can access private sector financing to undertake necessary recovery, even though this has been slow to date.

In Antigua, the tourism sector also sustained significant damage. A number of the larger properties have been reopened and the cruise shipping industry remains vibrant. In agriculture, preliminary estimates indicate that the livestock sector sustained a 15 percent loss. Damage to crops was brought about by the heavy winds. In particular, cotton, the major export crop, sustained substantial damage. As a result of the hurricane the projected yield for 1999 will be about 30 percent of the normal yield. As a result, reliable seed storage facilities are a high priority. This is particularly important given the unique quality of "Sea Island cotton" which yields a high quality fiber. It would be impossible to obtain replacement seeds elsewhere. Other government structures in the agricultural sector, which were damaged, include the tree propagation center, research centers and the agricultural export center.

Although the government has not been able to address agricultural sector needs to date, it would like to explore the development of a loan mechanism to address some of the sectoral needs. Further, there is still an outstanding need for credit to help small farmers and producers to restore their productive capacity in vegetable and poultry farming, and in fishing, as recovery in these areas remains slow.

Achieving the IR will involve focusing on activities linked to restoring export crop production facilities, and assisting small-scale farmers and micro and small-businesses.

Illustrative approaches

The following types of activities could be supported:

Supporting the Rehabilitation of Export Crop Structures in Antigua

With the support of the disaster mitigation activities under the SpO, the focus will be on the retrofitting and rehabilitation of facilities in Antigua, including storage facilities for the cotton seed bank and the agricultural export center. These facilities were not built to the appropriate building code standards. Primary focus will be on the use of hurricane resistant designs for these structures, in particular for roofs.

OFDA has a number of retrofitting activities underway in the housing sector in Antigua through its CDMP project. These activities could be expanded to include retrofitting these key agricultural production and export facilities.

Credit to Disadvantaged Small Farmers/Producers and Micro Businesses

Hurricane Georges removed the livelihood and earning capacity of many small producers and micro-businesses, increasing the number of individuals seeking support under social welfare programs. In both Antigua and St. Kitts, the representatives of the Ministries of Agriculture expressed interest in having credit made available to help the marginal farmers recover from the loss of earning capacity due to the hurricane destruction of their crops and livestock. USAID will support such a lending program only where local institutions and mechanisms exist and have a track record of capably providing credit. If as a result of an assessment of present capability, it is determined that no such mechanism can be readily accessed, funds allocated for this activity would be used for other SpO activities.

Expected Outcomes

- Selected export crop facilities retrofitted using hurricane resistant design and mitigation techniques (Antigua only)
- Small farmers and micro-businesses receiving credit

Ultimate Customers

Target beneficiaries for the SpO are low-income earners who have limited or no access to commercial credit or other support services for agricultural production or small business.

Intermediate Customers

Intermediate customers involve the National Development Foundations and where relevant other small scale credit agencies such as a local credit union or cooperative financing agency.

V. COORDINATION WITH OTHER DONORS

Close coordination with and among all the partners involved in reconstruction and recovery efforts is a vital task that USAID will continue to carry out. Coordination specific to Hurricane Georges began in early October through a formal Donor Working Group and has continued on an informal basis among key donors, particularly among USAID, IDB, World Bank, the EU, France, Canada and England. USAID will include all partners in the implementation of SpO activities to assure that the available resources and efforts of all concerned move in a concerted fashion to further the recovery and reconstruction objectives.

VI. IMPLEMENTATION PLAN

The estimated financial requirement to support the above efforts includes approximately \$3 million in new U.S. Government supplemental funds during the period 1999-2001. Government institutions, other donors and local implementing partners will contribute toward the cost of the activities to be undertaken. USAID will implement activities through local and regional contractors and NGOs, and other U.S. Government agencies and international organizations. Activities will be carried out in concert with other donors and GOSK/GOA partners. Implied in this implementation approach is the need to establish close relationships and effective synergies between and among all partners as well as a continuous audit capability.

Once the SpO and budget allowances are approved, USAID will work with implementing organizations, the governments of St. Kitts & Nevis and Antigua & Barbuda, and with other national and regional public and private sector partners to develop the appropriate work plans and budgets covering a 24 month period.

The implementation schedule for new actions is shown in the Table 1. It is based on supplemental funds becoming available in fiscal year 1999. The schedule will be adjusted based on the work plans prepared periodically by the implementing partners as described in the Customer Service Plan.

Table 1

Implementation Schedule

1999-2001

Action	Estimated Target Date
USAID/J-CAR SpO submitted to AID/Washington	June 15, 1999
AID/Washington approval of SpO (DAEC Review)	July 15, 1999

Recipient countries advised of reconstruction program approval	July 30, 1999
AID/Washington provides budget allowances to Mission	August 9, 1999
Implementation Agreements signed with executing agencies (OFDA/LAC, PAHO, etc.)	August 25, 1999
Draft work plans developed with host country participating agencies and executing agencies	September 1, 1999
Initiate implementation of reconstruction activities	September 30, 1999
First quarterly review of program implementation conducted with respective executing agency and host country agencies	November 30, 1999
Hospital equipment installation completed	March, 2000
Quarterly review of program implementation	April, 2000
Quarterly review	July, 2000
Hospital ward reconstruction completed	September, 2000
Quarterly review	September, 2000
Quarterly review	February, 2001
Micro-credit program completed	June, 2001
Disaster mitigation program activities completed	July, 2001
Program final review and completion	August, 2001

VII. MANAGEMENT PROCEDURES

Roles and Responsibilities

USAID/J-CAR will negotiate agreements, monitor performance, coordinate implementation, and ensure proper accountability of funds in accordance with standard USAID policy and procedures.

USAID/J-CAR management, technical and support staff (including USDH and program funded staff) along with OFDA/LAC advisers will play a key role in defining overall SpO actions to attain desired results, and in fulfilling required USAID implementation monitoring, contract management, audit and evaluation responsibilities.

The USDH manager of the USAID/J-CAR regional program will have overall supervisory responsibility and will make periodic trips to the project sites. Supplemental OE funds will be required to support this individual's work in the Eastern Caribbean, and to pay for other USDH travel (e.g., management, legal, contracting, controller and technical office). Given the high cost of travel to project sites under this SpO – in relation to the hurricane supplemental programs being managed in other USAID missions, the OE costs will be higher.

USAID plans to recruit one full-time advisor (PSC) to assist in the coordination and management of activities under this SpO.

Arrangements with Implementing Partners

Local NGOs

USAID/J-CAR will maximize the use of local NGOs who have a proven track record in implementing planned activities quickly. In addition, the Mission will explore mechanisms to ensure that appropriate financial management and audits are conducted.

PAHO

PAHO is expected to play a key role in the construction of the pediatric ward for the Joseph N. France General Hospital, and in the assessment, procurement and installation of medical equipment and supplies.

Customer Service Plan (CSP)

Immediately following Hurricane Georges, USAID, NGOs and the national governments became involved in designing and implementing USG-funded disaster assistance. The design of this SPO reflects experiences and lessons learned by USAID/J-CAR and OFDA in providing emergency relief operations to date.

Additional in-country consultations with relevant agency and government representatives will be held to identify the most effective mechanisms for implementation. These entities will form part of a small core group and will serve as part of the in-country reconstruction team. This will ensure timely implementation of the recovery program and coordination with other donor assistance provided to each country. The core teams will work with USAID to finalize the work plan for the recovery program and assist with monitoring progress toward achieving the desired results.

Procurement Plan

There are two main categories of procurement actions that will be used to implement the SpO.

- Procurement actions through implementing partners.
- Procurement actions related to monitoring and management of the SpO.

Performance Monitoring and Evaluation

USAID, in concert with the implementing partners, will monitor performance and make decisions on formal evaluations. Performance monitoring will assess the extent to which the activities are contributing to the planned results. Based on an analysis of performance, USAID will recommend changes or modifications in the mix of activities and implementation strategies. Evaluations may also be used to assess activity effectiveness and recommend strategies for improving implementation through an analysis of obstacles and bottlenecks as well as achievements in management and administration. Funds are included in the budget to contract services for monitoring and evaluation.

Environmental Considerations

Initial Environmental Examinations (IEE) or impact assessments will be conducted based on existing regulations and USAID relevant guidelines, on a case-by-case basis, after review of each proposal.

VIII. COST ESTIMATES AND FINANCIAL PLAN

USAID Contribution

The overall contribution of the USG is estimated at \$3.5 million, including (a) \$3 million in Central America and the Caribbean Emergency Disaster Recovery Fund (hurricane supplemental) monies, (b) \$300,000 in Child Survival funds, and (c) \$200,000 in Development Assistance. The USAID contribution will be disbursed incrementally based upon the performance of the implementing partners. USAID plans to obligate all funds in FY 1999. Funds may be obligated through existing agreements with regional institutions and inter-agency

agreements. Implementation of activities may be through contracts, grants, cooperative agreements, Participating Agency Service Agreements, Personal Services Contracts, or other contract mechanisms. The establishment of concurrent audit facilities funded by USAID to oversee all expenditures will be a precondition to the disbursement of any/all funds. Activities will be completed within a two-year period from obligation of the hurricane supplemental funds.

Implementing Partners' Contribution

The local implementing partners will contribute toward the costs of carrying out the activities. The contributions will be mostly in-kind and will include personnel, office space, and related logistic support. The requirement of a 25 percent contribution may need to be waived for the overall program. A requirement for a specific contribution may be included in sub-agreements, on a case-by-case basis.

Audits

The USAID/J-CAR Controller will ensure that arrangements are made for periodic audits in accordance with USAID policies and procedures. Audits will take into account the historically difficult nature of disaster funds management.

ANNEX 1: BACKGROUND ASSESSMENTS

Per the Background Section, a number of assessments were conducted to determine the magnitude of the damages that Hurricane Georges inflicted. These included:

- An initial disaster assessment carried out by an OFDA team of experts that provided the basis for immediate, post hurricane, life-saving assistance;
- A follow-up assessment by OFDA in December of 1998 at the request of the LAC Bureau to determine the levels and types of unmet needs;
- An assessment by USAID/J-CAR and the LAC Bureau to determine the impact on the productive sectors and to identify needs in them;
- An assessment carried out by the Caribbean Development Bank, which estimated the overall economic damages to the islands' infrastructure;
- An initial health assessment followed by an in-depth survey of damage to the health infrastructure with specific focus on the damages to the Joseph N. France Hospital in St. Kitts by the Pan American Health Organization;
- A rapid sectoral assessment by the Governments of St. Kitts/Nevis and Antigua/ Barbuda on overall damage;

- Detailed sectoral assessments carried out by the Health, Tourism and Agricultural and Environmental sectors in both countries;
- An assessment by Antigua's National Office of Disaster Services (NODS) and St. Kitts' National Emergency Management Agency (NEMA) on overall shelter damages and the need and scope of a program to deal with the shelter problem;
- An evaluation of Hurricane Georges damages by the United Nation's Economic Commission for Latin America and the Caribbean (ECLAC);
- A rapid reassessment by a USAID/Jamaica funded team to assess the degree to which early identified needs still remain priority concerns for the islands' governments;
- Community level assessments conducted by US Peace Corps volunteers and NGOs;
- Reports from the Eastern Caribbean Donor Group Meetings which was chaired by the UNDP and attempted to coordinate donor assistance to prevent duplication of efforts and present opportunities for joint initiatives.

Complementing these planning efforts were several coordinating meetings with representatives from a variety of public and private sector entities (NGO partners, banks, etc.) and other donors to exchange information and determine the respective level of effort and resources planned for the recovery. The SpO design process considered the views and suggestions of community-level discussants in which victims (customers) provided their perceptions and insights on the USAID/Jamaica recovery and reconstruction strategy. The process, culminating in the preparation of this document, incorporated a comprehensive, systematic analysis which included:

- An internal review of USAID/Jamaica's ongoing portfolio, which could be tapped to complement new resources for recovery and reconstruction purposes;
- Consultations with USAID/W personnel and frequent and regular coordination with other elements of the US Embassy Country Team;
- Intensive discussions with public and private sector individuals concerned with the islands' recovery efforts, as well as with prospective participants in the SpO activities;
- Frequent discussions with other donors; and
- Recommendations made by concerned USAID direct hire, contract and FSN personnel who have an intimate knowledge of the Eastern Caribbean's development situation and relevant experience in carrying out development programs.

ANNEX 2: DEFINITIONS

- Emergency Supplies: The acquisition and delivery of emergency supplies to disaster management agencies for use in emergency shelters and for general distribution to the affected population. The supplies normally include plastic sheeting, sheets/blankets, cots, generators, water bottles, flashlights/lanterns, and cooking and feeding utensils;
- Hospital Reconstruction: The design and reconstruction of the medical, surgical, pediatrics, maternity and VIP wards and retrofitting of the soon to be completed psychiatric ward of the severely damaged Joseph N. France Hospital in St. Kitts. It does not include the equipment and supplies that are necessary to make the wards operational;
- Hospital Equipment and Supplies: The acquisition and delivery of hospital equipment and supplies to replace those destroyed in the Joseph N. France Hospital in St. Kitts. The Pan American Health Organization (PAHO) has currently been identified to procure and distribute hospital equipment and supplies. PAHO and the hospital have provided USAID/J-CAR with a comprehensive list of the supplies and equipment requirements.
- Micro-enterprise and Small Business Credit: The increase in credit availability to micro-entrepreneurs and small-scale businesses, including farmers. Micro-enterprise refers to businesses that operate in the informal sector by a single proprietor, usually the family. A small business operates in the formal sector and generally employs fewer than 50 employees;
- Mitigation: Permanently eliminate or substantially reduce long term risk and vulnerability to human life and property from natural and man-made disasters. Structural mitigation focuses upon modifications to existing structures and improved design of new structures, to increase their resistance to damage/destruction from natural hazard. Non-structural mitigation includes the development and adoption of building codes, zoning regulations, policies, practices, public education programs and other general disaster preparedness activities;
- Multi-purpose Community Shelters: The construction of structures designed to protect those persons most vulnerable to injury or death during a hurricane and thereafter serve as temporary refuge for those whose homes are damaged or destroyed. They provide secure storage for immediate disaster response material and include toilets, a kitchen and facilities to accommodate 50 to 100 people. They are used to lodge *in situ* the national, regional and international crews assisting in the restoration of public services while enabling other public facilities (e.g., schools) to resume their designated purpose. The community owned and operated centers provide a locus for a wide range of non-partisan, non-secular community activities between hurricane seasons;
- Shelter Policy, Program Development, and Management: The development of government policies on shelters and their management before, during, and after a natural

hazard impact. The shelter manager is ultimately responsible for the implementation of pre-determined systems that ensure the safety, security, and health of the victims of a disaster during the shelter occupation period.